

10/526673

DT01 Rec'd PCT/PTC 04 MAR 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-32 (canceled)

33.(new) A stripline device, comprising:

    a metal having a valve action;

    a dielectric coating formed on a surface of the metal having the valve action; and

    a conductive material layer formed around the metal having the valve action via the dielectric coating;

    wherein a pair of first electrode leading terminals is provided on both ends in a longitudinal direction of the metal having the valve action to make connection to through holes of a printed wiring board, and a pair of second electrode leading terminals is provided on different positions of the metal member to make connection to through holes of the printed wiring board.

34.(new) The stripline device according to claim 33, wherein the metal having the valve action is rectangular in cross section.

35.(new) The stripline device according to claim 33, wherein the metal having the valve action is circular or oval in cross section.

36.(new) The stripline device according to claim 33, wherein the metal having the valve action is shaped like a ring in cross section.

37.(new) The stripline device according to claim 33, wherein the

metal having the valve action is formed into a plate or foil.

38.(new) The stripline device according to claim 33, wherein both ends of the stripline device are bent or curved.

39.(new) The stripline device according to claim 33, wherein the metal having the valve action has a longitudinal width larger than a cross sectional width.

40.(new) The stripline device according to claim 33, wherein the electrode leading terminal in contact with the printed wiring board has an area larger than a cross-sectional area of the electrode leading terminal not coming into contact with the printed wiring board.

41.(new) A stripline device, comprising a metal having a valve action, a dielectric coating formed on a surface of the metal, a conductive material layer formed around the metal via the dielectric coating, and a metal member which is disposed in contact with the conductive material layer and transmits direct-current power, wherein:

the stripline device includes a first electrode leading terminal for connecting an end of the metal having the valve action and a printed wiring board;

second electrode leading terminals connected to the printed wiring board are integrally formed on the metal member; and

the second electrode leading terminals and the first electrode leading terminals connected to both ends of the metal having the valve action form four terminals.

42.(new) The stripline device according to claim 41, wherein:

the first electrode leading terminal includes:

a connecting member connected to the metal having the valve action;

a first leg member connected to a wire on the printed wiring board; and

a first body member for connecting the connecting member and the leg member;

the connecting member and the first leg member are connected almost perpendicularly to both ends in a longitudinal direction of the first body member;

the second electrode leading terminal integrally formed on the metal member includes:

a second body member; and

a second leg member for making connection to a wire on the printed wiring board;

the second body member is connected to an upper end of a mounting surface of both ends in a longitudinal direction of the metal member; and

the second leg member is connected to the body member almost in parallel with the mounting surface.

43.(new) The stripline device according to claim 41, wherein:

the first electrode leading terminal includes:

a connecting member connected to the metal having the valve action;

a first leg member connected to a wire on the printed wiring board; and

a first body member for connecting the connecting member and the leg member;

a member is provided to interpose the first body member between the connecting member connected to the first body member and the first leg member on both ends in a longitudinal direction of the first body member and connect the connecting member and the first leg member almost perpendicularly to the first body member; and

the second electrode leading terminals include second leg members connected to both ends in a longitudinal direction of the

metal member and near one of long sides of the metal member almost in parallel with the mounting surface.

44.(new) The stripline device according to claim 41, wherein:

the first electrode leading terminal includes:

a connecting member connected to the metal having the valve action; and

a first body member connected to a wire on the printed wiring board;

the connecting member is connected to an end in a longitudinal direction of the first body member almost perpendicularly to the first body member; and

the second electrode leading terminal includes a second body member connected almost perpendicularly to a vicinity of one of long sides of both ends in a longitudinal direction of the metal member.

45.(new) The stripline device according to claim 41, wherein:

the first electrode leading terminal includes:

a connecting member connected to the metal having the valve action; and

a first body member connected to a wire on the printed wiring board;

the connecting member is connected to an end in a longitudinal direction of the first body member almost perpendicularly to the first body member;

the second electrode leading terminal includes a second body member connected almost perpendicularly to a central area near both ends in a longitudinal direction of a mounting surface of the metal member; and

the first electrode leading terminal and the second electrode leading terminal are disposed almost in line with each other in the longitudinal direction of the mounting surface of the metal member.

46.(new) The stripline device according to any one of claim 41, wherein the first leg member and the second leg member have a cross sectional area larger than a cross sectional area of the first body member and the second body member not coming into contact with the printed wiring board.

47.(new) The stripline device according to claim 33, wherein the conductive material layer includes a layer of a conducting polymer.

48.(new) The stripline device according to claim 47, wherein the conducting polymer is one or more compounds selected from the group consisting of polypyrrole, polythiophene, and polyaniline, or a derivative of the compounds.

49.(new) The stripline device according to claim 47, wherein the conductive material layer has the conducting polymer layer disposed on a side of the dielectric coating and a conductive paste layer formed on the conducting polymer layer.

50.(new) The stripline device according to claim 49, wherein the metal member is fixed on the conductive paste layer.

51.(new) The stripline device according to claim 33, wherein the metal having the valve action is a metal selected from the group consisting of aluminum, tantalum, and niobium.

52.(new) The stripline device according to claim 33, wherein the metal having the valve action, the dielectric coating, and the conductive material layer are molded with resin.

53.(new) A printed wiring board mounting member, comprising:  
a low impedance line device having a laminated structure in

which a dielectric coating having a dielectric loss is interposed between first and second conductors;

first electrode leading terminals which are disposed on both ends of one of the conductors to make connection to a printed wiring board; and

second electrode leading terminals for connecting both ends of a metal member for mounting the low impedance line device and the printed wiring board; wherein

the first electrode leading terminal includes a connecting member connected to the first conductor, a first leg member connected to a wire on the printed wiring board, and a first body member for connecting the connecting member and the leg member;

the connecting member and the first leg member include members on both ends in a longitudinal direction of the first body member to make connection almost perpendicularly to the first body member;

the second electrode leading terminal includes a second body member connected to the metal member and a second leg member connected to a wire on the printed wiring board;

the second body members are connected to an end on the same long side of both ends in a longitudinal direction of a mounting surface of the metal member; and

the second leg member is connected to the second body member almost in parallel with the mounting surface.

54.(new) A printed wiring board mounting member, comprising:

a low impedance line device having a laminated structure in which a dielectric coating having a dielectric loss is interposed between first and second conductors;

first electrode leading terminals which are disposed on both ends of one of the conductors to make connection to a printed wiring board; and

second electrode leading terminals which are disposed on both ends of a metal member for mounting the low impedance line

device to make connection to the printed wiring board; wherein  
the first electrode leading terminal includes a connecting member connected to the first conductor, a first leg member connected to a wire on the printed wiring board, and a first body member for connecting the connecting member and the leg member; members are provided on both ends in a longitudinal direction of the first body member to interpose the first body member between the connecting member and the first leg member and make connection almost perpendicularly to the first body member; and

the second electrode leading terminals have second leg members connected to an end on the same long side of both ends in a longitudinal direction of a mounting surface of the metal member almost in parallel with the mounting surface.

55. (new) A printed wiring board mounting member, comprising:

a low impedance line device having a laminated structure in which a dielectric coating having a dielectric loss is interposed between first and second conductors;

first electrode leading terminals which are disposed on both ends of one of the conductors to make connection to a printed wiring board; and

second electrode leading terminals which are disposed on both ends of a metal member for mounting the low impedance line device to make connection to the printed wiring board;

the first electrode leading terminal includes a connecting member connected to the first conductor, a first leg member connected to a wire on the printed wiring board, and a first body member for connecting the connecting member and the leg member;

the connecting member is connected almost perpendicularly to an end in a longitudinal direction of the first body member; and

the second electrode leading terminals have second body members connected to an end on the same long side of both ends in a longitudinal direction of a mounting surface of the metal

member almost perpendicularly to the mounting surface.

56.(new) A printed wiring board mounting member, comprising:

a low impedance line device having a laminated structure in which a dielectric coating having a dielectric loss is interposed between first and second conductors;

first electrode leading terminals which are disposed on both ends of one of the conductors to make connection to a printed wiring board; and

second electrode leading terminals which are disposed on both ends of a metal member for mounting the low impedance line device to make connection to the printed wiring board; wherein

the first electrode leading terminal includes a connecting member connected to the first conductor, a first leg member connected to a wire on the printed wiring board, and a first body member for connecting the connecting member and the leg member;

the connecting member is connected almost perpendicularly to an end in a longitudinal direction of the first body member;

the second electrode leading terminal has a second body member connected almost to a center of a short side of both ends in a longitudinal direction of a mounting surface of the metal member almost perpendicularly to the short side; and

the first electrode leading terminal and the second electrode leading terminal are disposed almost in line with each other in the longitudinal direction of the mounting surface.

57.(new) The printed wiring board mounting member according to claim 53, wherein the first leg member and the second leg member in contact with the printed wiring board have a cross sectional area larger than a cross sectional area of the first body member and the second body member not coming into contact with the printed wiring board.

58.(new) The printed wiring board mounting member according to



claim 53, wherein the low impedance line device is molded with resin.

59.(new) A circuit board having a metal which has a valve action, a dielectric coating formed on a surface of the metal having the valve action, a conductive material layer formed around the metal having the valve action via the dielectric coating, and a metal member for transmitting direct-current power to be inputted, comprising:

- a stripline device having first and second input/output terminals on both ends of the metal having the valve action and both ends of the metal member;

- a board; and

- a first power supply wire and a second power supply wire formed on the board;

wherein the first power supply wire and the second power supply wire are connected to the first and second input/output terminals, respectively.

60.(new) The circuit board according to claim 59, wherein circuit elements for receiving power of an equal voltage are disposed on the circuit board in an integrated manner, and an equal power is supplied by a bus bar.

61.(new) A semiconductor package having a metal which has a valve action, a dielectric coating formed on a surface of the metal having the valve action, a conductive material layer formed around the metal via the dielectric coating, and a metal member for transmitting direct-current power to be inputted, comprising:

- a stripline device having first and second input/output terminals on both ends of the metal having the valve action and both ends of the metal member;

- a substrate made of an insulating material; and

- a semiconductor chip mounted on the substrate; wherein

the substrate has a first connector pin and a second connector pin which are connected to the device mounted on the board;

the semiconductor chip has a first power supply wire and a second power supply wire; and

the first and second input/output terminals are connected to the connector pins of the substrate and the power supply wires of the semiconductor chip, respectively.

62.(new) A method of forming a stripline device, comprising the steps of:

forming a metal having a valve action;

forming a dielectric coating on a surface of the metal having the valve action;

forming a conductive material layer around the metal having the valve action via the dielectric coating to form a strip line;

bonding the strip line and a plurality of substrates, on which a metal member having a second electrode leading terminal and a lead frame serving as a first electrode leading terminal are integrally formed, after performing positioning such that the conductive material layer and the metal member are in contact with each other and the lead frame and the metal having the valve action are in contact with each other; and.

cutting the second electrode leading terminal and the lead frame from the substrate at a predetermined distance to complete a stripline device.